Appendix C
Correlated PM_{10} Concentrations and Winds

The following graphs illustrate the direct correlation between wind speeds[1] and PM_{10} concentrations at select monitoring sites within the Salton Sea Air Basin on March 6, 2016. Note a variety of instruments measure wind speed at different times during any given hour. Therefore, the following graphs reflect the hour of the wind measurement.

IMPERIAL COUNTY SELECT SITES
(FIGURES C-1 to C-5)

FIGURE C-1
BRAWLEY PM_{10} CONCENTRATION & WIND SPEED CORRELATION

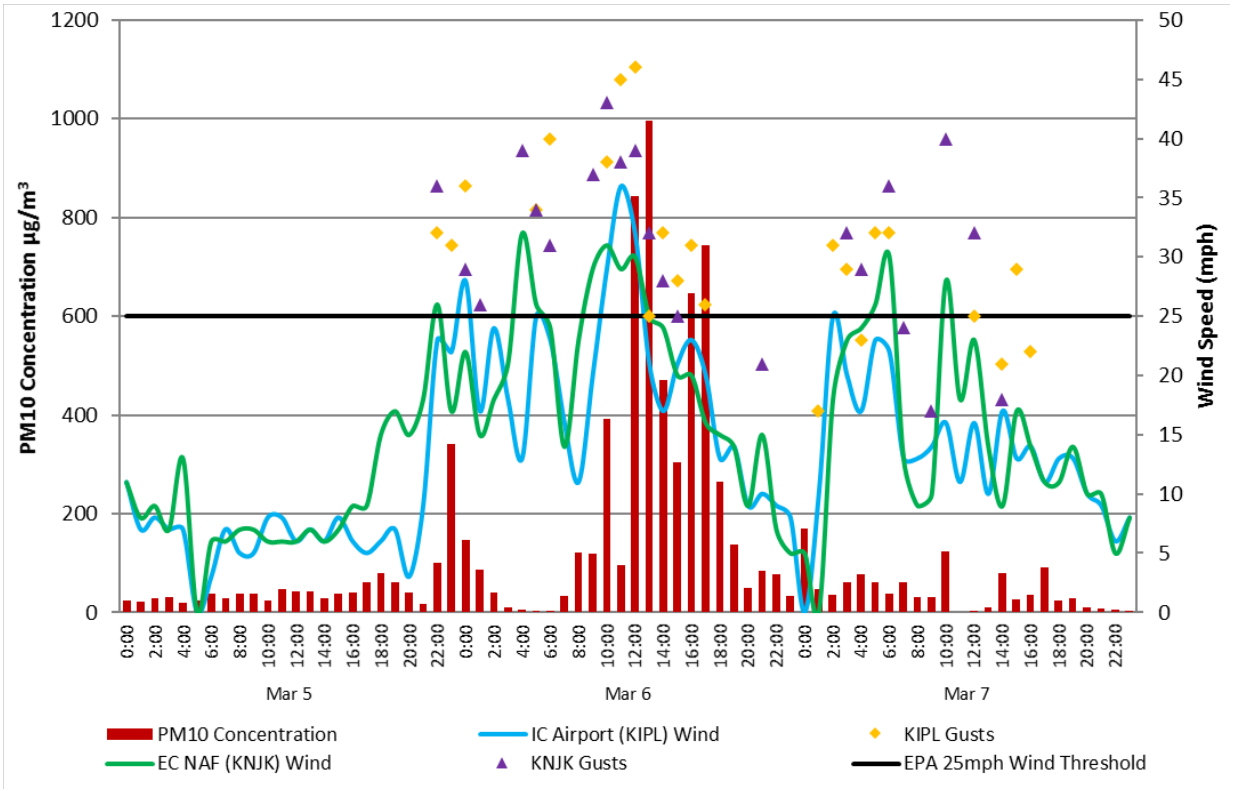

Fig C-1: Winds and gusts at Imperial County Airport (KIPL) and El Centro NAF (KNJK) began increasing late on March 5, 2016. Winds, and particularly gusts, remained above the 25 mph wind threshold for several hours on March 6, 2016. The high winds transported dust downstream to the Brawley monitor. Air quality and wind data from the EPA's AQS data bank. Wind data from the NCEI's QCLCD system

[1] National Weather Service; NOAA's Glossary – Wind Speed: The rate at which air is moving horizontally past a given point. It may be a 2-minute average speed (reported as wind speed) or an instantaneous speed (reported as a peak wind speed, wind gust, or squall); https://w1.weather.gov/glossary/index.php?letter=w

FIGURE C-2
CALEXICO PM_{10} CONCENTRATION & WIND SPEED CORRELATION

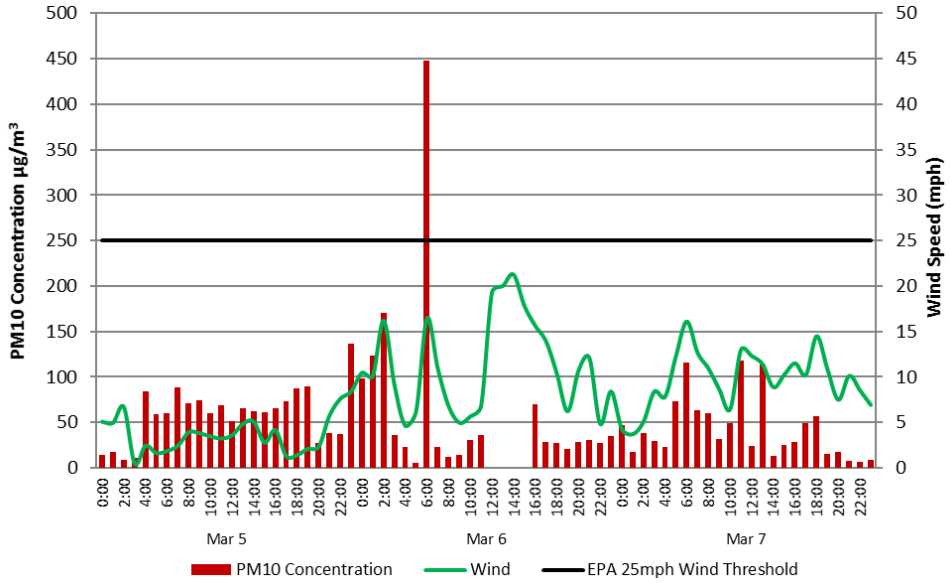

Fig C-2: Calexico measured spikes in PM_{10} concentration in response to increased wind speeds during the early part of March 6, 2016, but winds did not rise above the 25 mph threshold. Air quality and wind data from the EPA's AQS data bank

FIGURE C-3
EL CENTRO PM_{10} CONCENTRATION & WIND SPEED CORRELATION

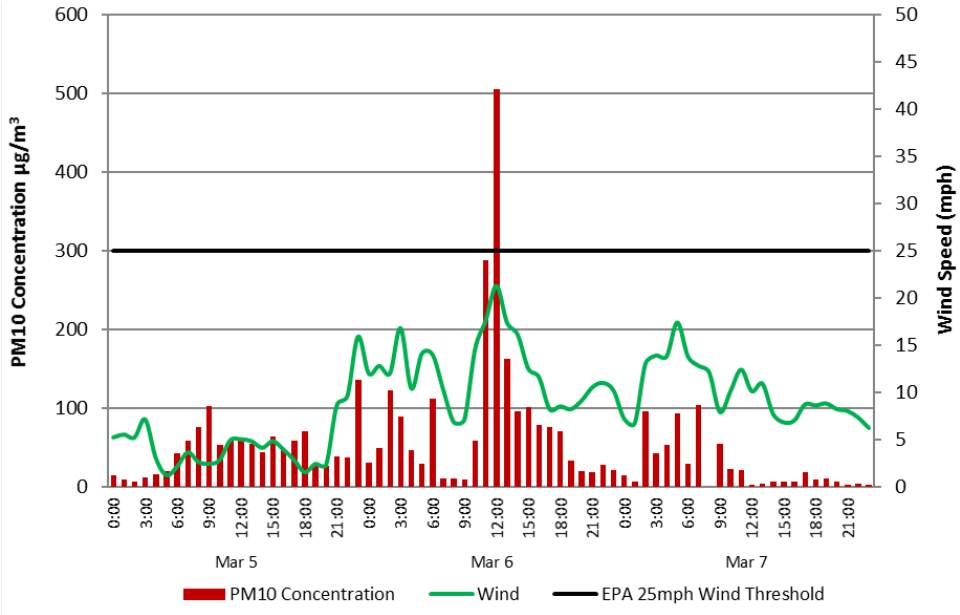

Fig C-3: El Centro measured spikes in PM_{10} concentration in response to increased wind speeds on March 6, 2016, but winds did not rise above the 25 mph threshold. Air quality and wind data from the EPA's AQS data bank

FIGURE C-4
NILAND PM_{10} CONCENTRATION & WIND SPEED CORRELATION

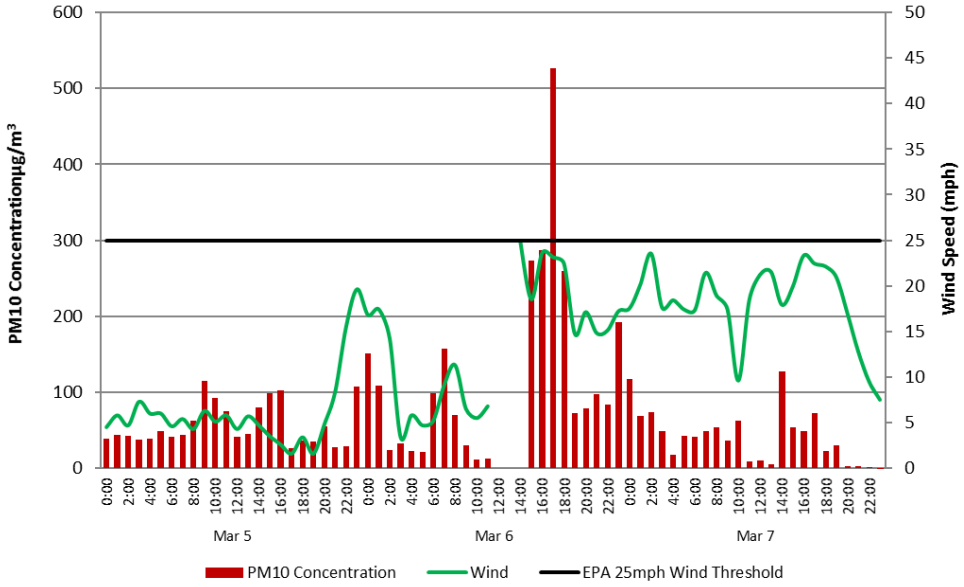

Fig C-4: Niland measured spikes in PM_{10} concentration in response to increased wind speeds early on March 6, 2016. Missing data is due to a power failure. Air quality and wind data from the EPA's AQS data bank

FIGURE C-5
WESTMORLAND PM_{10} CONCENTRATION & WIND SPEED CORRELATION

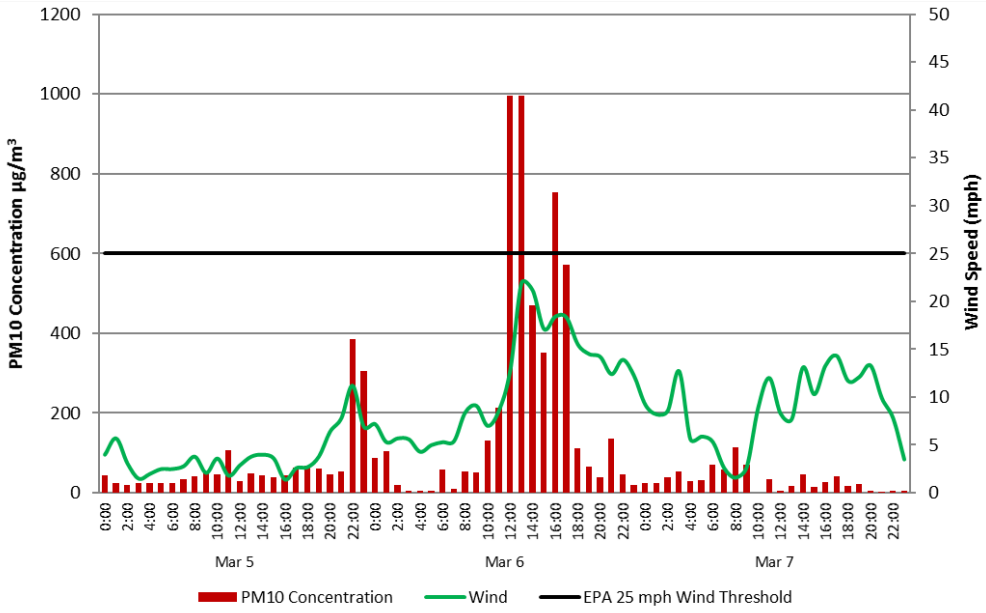

Fig C-5: Westmorland measured spikes in PM_{10} concentration in response to increased wind speeds on March 6, 2016, although winds never exceeded the 25 mph wind threshold. Air quality and wind data from the EPA's AQS data bank

RIVERSIDE COUNTY MONITORING SITES

FIGURE C-6
TORRES-MARTINEZ TRIBAL PM_{10} CONCENTRATION & WIND SPEED CORRELATION

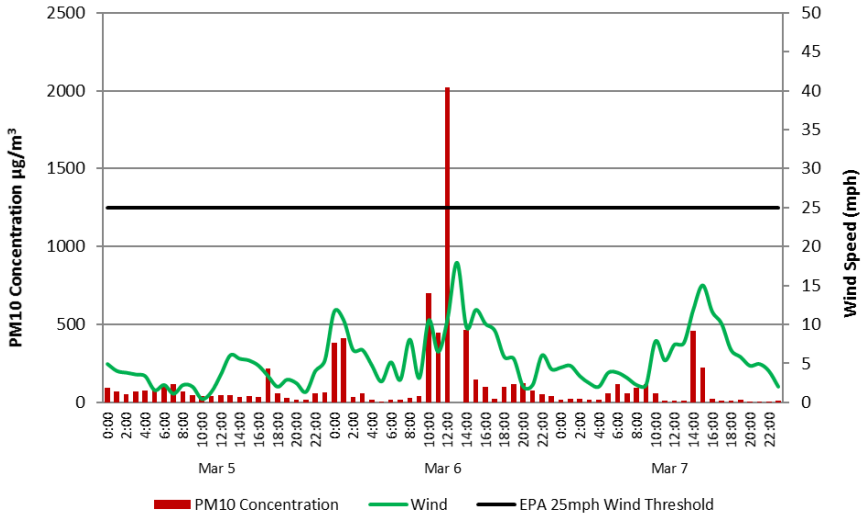

Fig C-6: The Torres-Martinez Desert Cahuilla Indian Reservation measured spikes in PM_{10} concentration in response to increased wind speeds on March 6, 2016, although winds never exceeded the 25 mph wind threshold. Air quality and wind data from the EPA's AQS data bank

FIGURE C-7
INDIO (JACKSON ST) PM_{10} CONCENTRATION & WIND SPEED CORRELATION

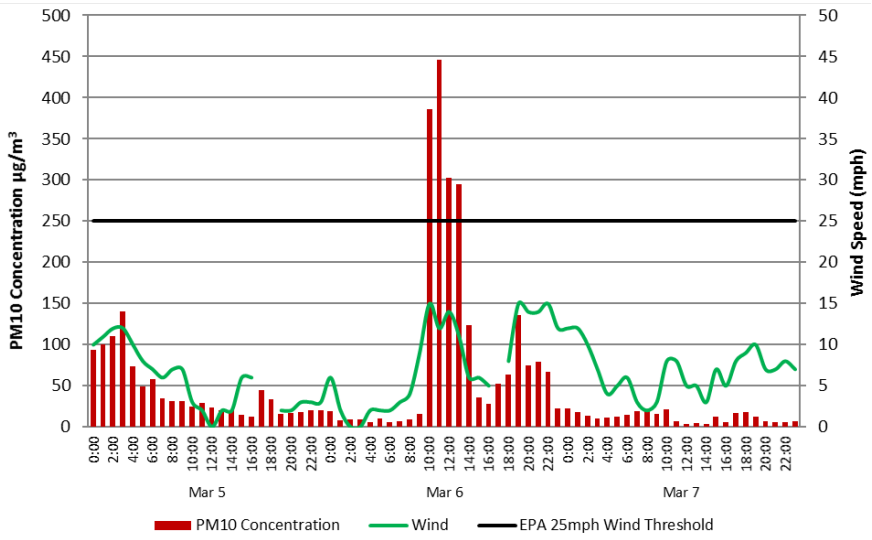

Fig C-7: Indio (Jackson St) measured spikes in PM_{10} concentration in response to increased wind speeds on March 6, 2016, although winds never exceeded the 25 mph wind threshold. Air quality data is from the EPA's AQS data bank. Wind data is from AQMIS

FIGURE C-8
PALM SPRINGS FIRE STATION PM_{10} CONCENTRATION & WIND SPEED CORRELATION

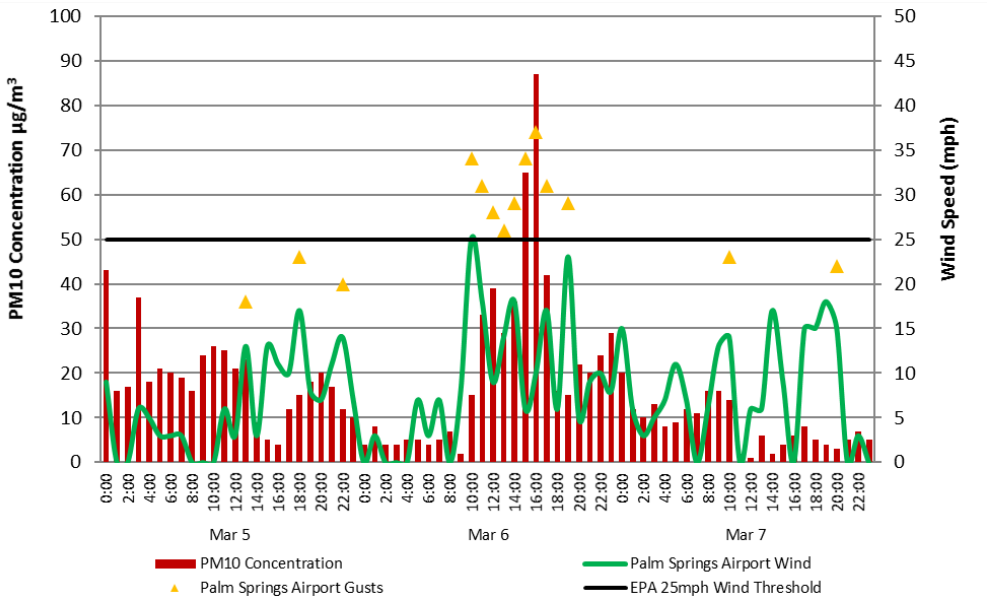

FIGURE C-9
PALM SPRINGS FIRE STATION PM_{10} CONCENTRATIONS & WIND SPEED CORRELATION (AQMIS DATA)

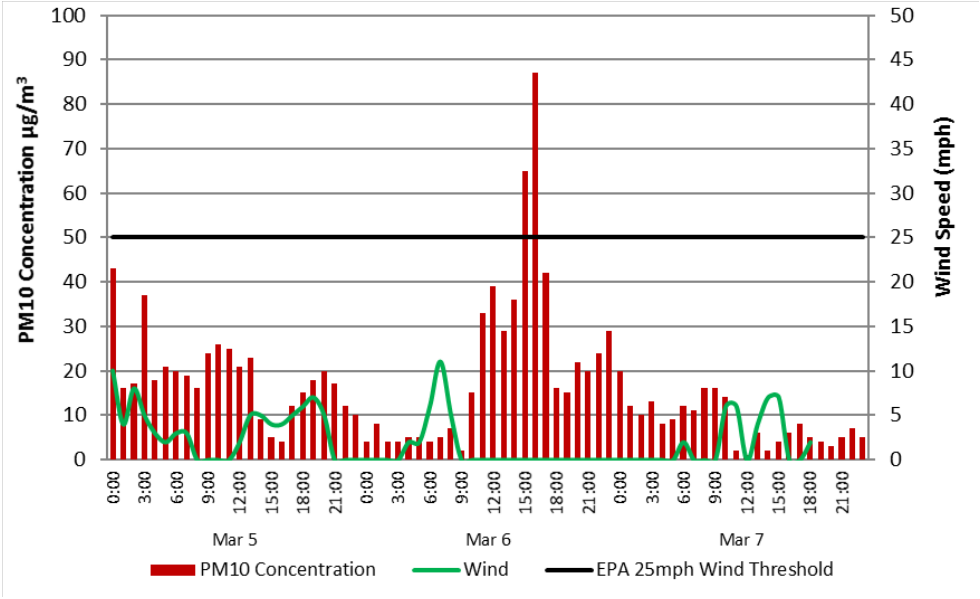

Fig C-8 & C-9: Palm Springs Fire Station saw increased concentrations following an increase of wind speed on March 6, 2016. Air quality data is from the EPA's AQS data bank. Wind data is from the NCEI's QCLCD system

SOUTHWESTERN ARIZONA

FIGURE C-10
YUMA, ARIZONA SUPERSITE PM_{10} CONCENTRATION & WIND SPEED CORRELATION

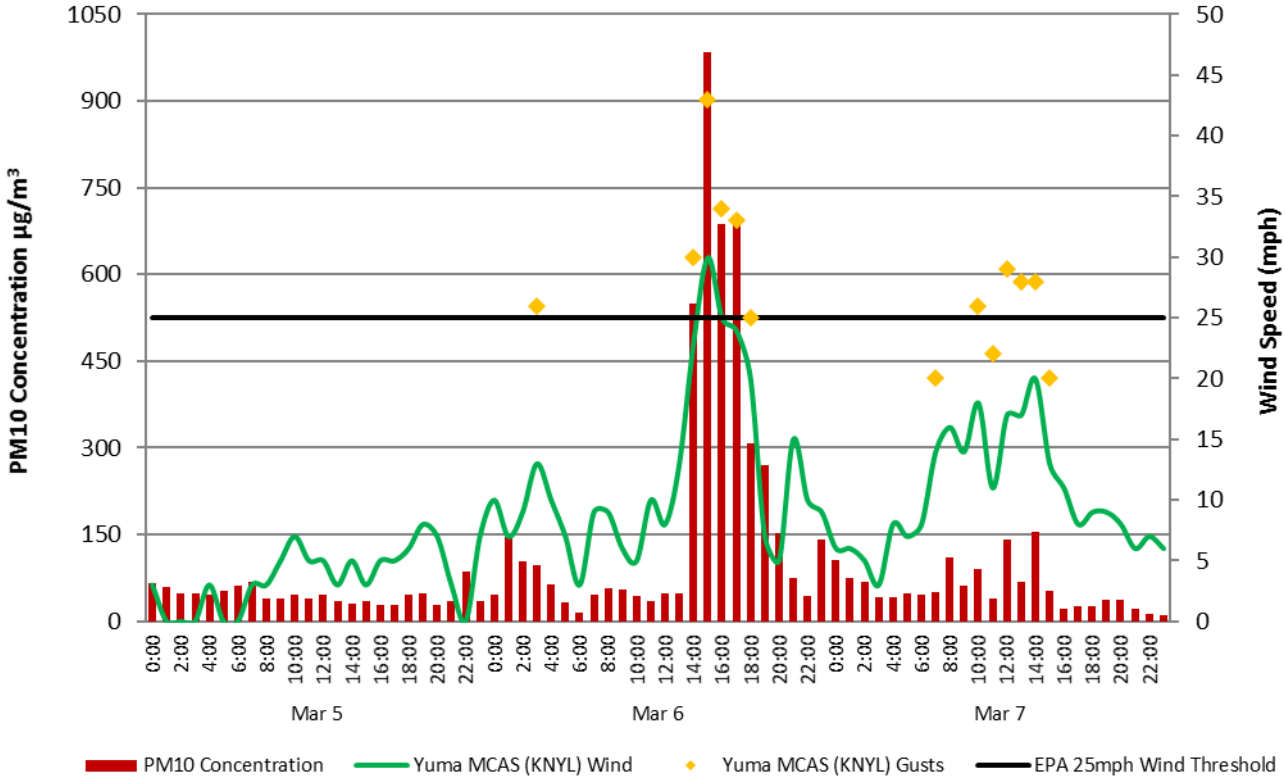

Fig C-10: Yuma, Arizona MCAS on March 6, 2016. Air quality data is from the EPA's AQS data bank. Wind data is from the NCEI's QCLCD system. Yuma shown in PST